The Digital Curriculum

How to prepare tomorrow's
teachers for today's technology

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Introduction

In 2016, the NSPCC reported an 88% rise in children seeking help for online abuse. That same year, the mother of Felix Alexander – a 17-year-old boy from Worcester who killed himself after years of bullying – penned a heartfelt open letter.

In that letter she explained how "with the advent of social media (Felix's bullying) became cruel and overwhelming."

Sadly Felix's is by no means an isolated case. Online abuse had plagued people of all ages in the past few years, often with similarly heartbreaking results.

But that's not where the dangers end.

As the government and law enforcement try to chase radicalisation by extremist groups off the streets, these groups are heading into the digital world, where people can be manipulated and recruited in secret. And often those people are just teenagers.

Instances of homophobia and racism, too, are on the rise – the relative anonymity of the internet emboldening those who sadly hold those views.

Add to this the constant worry of children seeing inappropriate or harmful content such as pornography, and the increasing threat of online fraud or theft, and you have an enormous minefield of worry for the parents who send their kids to school every day and the teachers who are responsible for those kids once they arrive.

There has to be a better way.

That is what this report set out to discover: where do the risks lie when it comes to digital technology in schools, and what more could be done – by teachers, parents, government or even the pupils themselves – to make sure no children come to harm?

Importantly, however, we wanted to recognise the significant benefits technology can bring to education, and think about ways to alleviate the dangers without dampening that progress.

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Read on to learn what we discovered…

Key Findings

WHY WE NEED TECHNOLOGY IN SCHOOLS

96% of teachers believe technology has had a **positive impact** on the classroom

Number of respondents who say the biggest benefit is that pupils were noticeably **more engaged**

56%

49% of teachers say it has made them **more efficient**

HOWEVER...

26% of teachers are concerned about school children being able to access **inappropriate material** online"
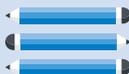
25% said that technology **hinders** skills in **communication**

33% teachers are concerned that they **cannot control** what children are doing on their devices the whole time

THE RISE OF CYBERBULLYING

66% of teachers are **concerned** about online bullying

37% increase in instances of **online bullying** in the past year

43% of teachers asked have had to **deal with online bullying** in the class

The number of teachers who are **not confident** they would know if a pupil was being **cyberbullied**

34%

HOW TO FIGHT THE THREATS

84% say government should do more to **train & prepare teachers** to keep children safe online

81% say there's a real need for **online safety officers in schools**

52% want **clearer guidelines** from the school

55% of teachers want regular **training sessions** delivered by online safety experts

40% of respondents we asked want a **dedicated telephone helpline for teachers**

77% believe social media and tech companies are **not doing enough** to protect children

OTHER RISKS

39% of teachers say **online grooming** is a concern

Increase in incidents of children **watching or sharing porn** in the past year

26%

Rise in **homophobic or racist** content:

25%

21% increase in **radicalised content**

The positive impact of technology in schools

The headline-grabbing sound bites about technology tend to be the ones that paint it in a negative light, particularly when it comes to young people. Often the positive impact technology has had on the classroom and the learning going on within it get overlooked.

86%

of teachers say that technology has made them **perform better**

That's not to say we haven't highlighted any problems in this report. But before we go

down that road, let's first look at the good technology has done for education.

A staggering 86% of teachers told us technology has enabled them to perform better. This is huge. A significant majority stating in no uncertain terms that they can do a better job as a teacher because of the technology they have at their disposal.

But let's look at specifics

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More than half (54%) say they can plan more varied and exciting lessons, while half say those lessons are easier to plan in the first place.

And 49% of teachers believe technology has made them more efficient, with a third saying it makes marking easier.

These are not benefits to be taken lightly. You'd be hard-pressed to find a single teacher who didn't want to take some of the stress out of lesson-planning or make marking less time-consuming.

Perhaps even more important, however, is the impact technology is having on the learning itself. On the pupils.

Almost all teachers we surveyed say technology and digital services have had a positive impact on the classroom. And more

than half (56%) say children are more engaged in learning when using technology.

Part of the reason for this latter statistic could be that technology makes the classroom more vibrant and fun, according to 53% of respondents.

Think back to the classes you were most engaged in as a child. Likely it was the ones you most enjoyed. In fact, a 2014 study of adult education found a number of positives that stem from fun and enjoyment in learning, such as increased motivation to learn new skills and knowledge, better concentration and a greater ability to absorb information.

But aside from fun and engagement, a further 47% of teachers say technology also provides more access to information, another critically important element of learning.

Making the classroom fun is one thing, but you can't create a generation of brilliantly educated kids if the content isn't right. The fact technology provides more options for finding that content suggests it has value beyond just entertainment.

Other benefits of technology highlighted by teachers, though not quite so frequently, included:

Making it easier to **monitor** pupils' progress (24%)

Encouraging **collaboration** and sharing among pupils (23%)

Allowing learning to continue **outside the classroom** (21%)

96%

of teachers believe technology has had a **positive impact on the classroom**

The future

We've talked about the general impact of technology in schools. But what about the specific digital services and tools that teachers are using, or will use in future?

According to respondents, the technologies that could have the biggest impact are:

Touchboards (e.g. interactive whiteboards or projectors) (86%)

Digital portfolios (where pupils can share notes and collaborate on projects) (80%)

Virtual/augmented reality (76%)

Artificial intelligence (71%)

Moving digital walls (70%)

Flexible displays (67%)

SMOOTHWALL SAYS

"There is no doubt that, as a whole, technology has a positive impact on the classroom, our teaching community and the learning experiences of the children going through their education. The results of the study make this very clear. Used correctly, technology can better engage our young people, better monitor their progress and, ultimately, it should help ensure they leave school with better qualifications than in a world without tech.

The result that really stands out is that 47% of teachers say technology provides more access to information. 'Access to information' sits at the heart of tech in education – both positively and negatively. In this instance, it's a beneficial thing but the reality of digital is that there is also plenty of harmful information online, which means this 'access' can quickly become a concern. The key is to control what information is reaching the classroom and ensure that the teachers running the room are aware of and alert to the dangers."

The risks of a digitally transformed classroom

While the good that technology has done for schools is undeniable, you can't responsibly talk about the positives without also addressing the risks.

Many teachers we spoke to have major concerns about technology in classrooms.

A third (33%) said their biggest concern about technology in the classroom is that they can't always control what children are doing on their devices.

26%
of teachers are **concerned** about schoolchildren being able to access **inappropriate material online**
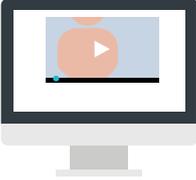
While that might not sound too alarming in itself, it's the lack of visibility over potentially damaging content that worries people.

More than a quarter (26%) say their biggest concern is that schoolchildren are able to access inappropriate material online.

But there's more to this story than a desire to protect pupils from harmful content, though that is hugely important. Many teachers also have concerns about technology's impact on children's development.

26%
of teachers say technology can **hinder pupils' communicative skills**

With 46% of hiring managers already rating communication as a skills gap among new graduates, according to a Fastcompany report, clearly the working world can't afford for that gap to widen further.

If classroom technology really is having a negative impact on the way young people communicate, that needs to be addressed. And soon.

Other risks highlighted include the belief that when a pupil is using technology it can distract other pupils from their work, with 54% saying citing this as an issue.

One particularly unpalatable side-effect, which we'll explore in much more detail later on in this report, has been the increase in teasing and cyberbullying.

Almost half (47%) of teachers believe these problems have increased as a direct result of technology in schools.

Other issues include technology failing during a lesson, with 38% citing this as a challenge, while 34% believe there is too much information to take in online and traditional books are easier for pupils to digest.

We've talked about the potential risks to pupils, but what about teachers? How is it hindering their day-to-day lives?

Thankfully only a minority (12%) believe it encourages 'lazy teaching'. This suggests people aren't simply falling back on technology to make their job easier, but rather applying it where it can actually add value.

A somewhat sad but unsurprising finding, however, is that 44% of teachers don't use social media anymore because they don't want pupils to look at their profiles.

Perhaps more serious from a professional point of view is the fact that 68% of teachers believe pupils know more about the technology on offer than they do,

immediately putting them on the back foot.

There is also a sense from teachers that they're being forced to 'keep up' with rapid changes in digital tools and services.
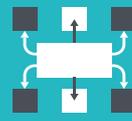
57%

almost three-fifths admit they're under pressure to **use the latest technology in the classroom**

That said: only 17% say it's difficult to keep up with innovation, so it seems they're largely coping well with that pressure so far.

SMOOTHWALL SAYS

"Technology opens up many avenues to more information and better resources. As discussed in the previous section, access to information is a positive thing – but teachers must be able to control this. And yet when 68% of teachers admit their pupils know more about technology than they do, you can easily see where problems arise.

We live in an age where children are learning to use smartphones at the same time they're learning to walk. Whereas

many of the teachers trying to control their use of technology in school were not born into a digitally-led world. How can they be expected to stay one step ahead of how pupils are using technology? The answer is to coach them – ensuring they are given all the courses and information they need around the benefits and the dangers of digital in the classroom. This information must be regularly reviewed and updated. The online world changes in the blink of an eye and it's vital teachers are up to speed."

Making online safety a shared responsibility

Now we move into one of the most important parts of any teacher's job – the thing millions of parents trust them to do every day: keep their children safe.

Specifically we wanted to find out whether teachers think technology is in danger of making pupils less safe, and what more could be done to reduce the dangers.

One thing we learned is that teachers are not naïve when it comes to the risks involved, nor are they in the dark as to the nature of those risks or how important they are.

The vast majority (87%) say the issues around online safety have become clearer to them in the last 12 months.

Even more (92%) recognise that keeping safe online is just as important as keeping safe in the real world, while 87% say online safety should be a key part of the curriculum.

These numbers are hugely promising. The first step to solving a problem is recognising it's there in the first place, and clearly teachers are in no doubt as to the significance of this issue.

Yet a worrying 41% say online safety is not taken seriously enough in schools.

Clearly there's a disconnect here between awareness and action. So who's responsible for reducing those risks and making sure children don't come to harm?

More than four-fifths (84%) of respondents say the government should be doing more to prepare teachers, better training them to keep kids safe in class.

But don't let that make you think they're absolving themselves of accountability. While it's true the government has control over training teachers, young people need to hear the right messages too.

41%

of teachers say online safety is **not taken seriously enough in schools**

100% of those we surveyed believe teachers are responsible for teaching children how to be safe online, suggesting they all feel a sense of personal duty when it comes to protecting their pupils from harm through technology.

As for who else should take on this burden, it should come as little surprise that 98% believe parents or guardians are responsible. And again the government has been strongly

called out, with 94% of teachers saying it is responsible for teaching kids how to be safe online.

Interestingly, a massive 90% of teachers believe social media companies such as Facebook and Twitter have a duty to step up to this job. This follows the Home Select Committee this year calling social media firms "shamefully far" from tackling illegal and dangerous content.

77%

of teachers say social media and technology companies are **not doing enough to protect children**

And it seems teachers are with the government on this one. 77% of them say social media and tech companies are not doing enough to protect children.

So we know who is responsible for tackling these issues in the eyes of teachers, but what specifically could be done?

The first step is communication – actually taking the time to talk with pupils and help them understand the dangers.

Almost all (96%) of the teachers we surveyed said it's vital to discuss online safety with children, with 69% strongly agreeing.

The Prevent duty also scored highly as a means for keeping pupils safe. This is a government initiative introduced in July 2015 that serves to prevent young people being drawn into extremism or terrorism.

The majority (77%) of teachers say they've heard of the Prevent duty, with 77% again believing it has had a positive impact already.

Finally, teachers believe more could be done to improve their schools' security systems, with 41% concerned about suffering a cyber attack.

Despite the risks and room for improvement we uncovered, however, there is some positive news:

Almost three-quarters (73%) of teachers are confident their pupils are completely safe at school.

SMOOTHWALL SAYS

"There has been a concerted effort by the government to raise awareness of online safety in education over the last few years. The Prevent duty, published in 2015, was an important step in guiding schools in protecting children from terrorism and radicalisation. But clearly, based on this study, there is still much work to be done.

The issue of who leads the efforts to protect our young people is a complex one. Clearly, parents have a responsibility, as do teachers. In fact, the vast majority believe online safety should actually be a core part of the national curriculum. But it's interesting to see so many teachers point to the government and especially social media platforms as needing to step up. Over three-quarters of the teachers surveyed believe the likes of Facebook and Google are simply not doing enough to protect young people. This argument will rage on but clearly, the views of the people on the front-line in protecting our children on the internet believe there is too much inaction and finger pointing. We must all act together."

Cyberbullying – teachers are calling for help

Online bullying has made the news multiple times in the past few years, with often-devastating stories beneath the headlines. Some schoolchildren have been driven to suicide as a result of this growing trend.

Now that we've covered off the positive impact digital tools and service have had on school-level learning and some of the risks and stumbling blocks teachers have come up against, the time has come to address the unavoidable truth uncovered by our report: the darker side of technology in education.

66%
of teachers are
concerned about online cyberbullying
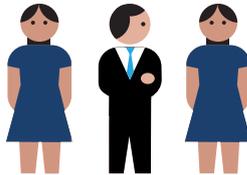
It stands to reason, then, that 53% of teachers are most worried and frightened about the threat of bullying on social media.

Radicalisation – the risk the aforementioned Prevent duty seeks to dampen – is seen as most worrying by 30% of teachers.

Relatively few (14%) are most worried about the watching and sharing of pornographic material, while just 3% say the same about racist or homophobic material.

These latter figures are particularly interesting given they're seemingly at odds with reality.

Teachers say the number of incidents involving the sharing and watching of pornographic material has increased by 26% in the last year, while for homophobic and racist material that figure is 25%.

But the sharing of radicalised content, while a concern for more teachers than either of the above, has only increased by 21% in the period.

Given the frequency of terror-related coverage in the media and the attacks on UK soil in recent months, could outside influences be having an impact on teachers' concerns when it comes to radicalisation?

Of all the worries highlighted, however, online bullying has sadly had by far the biggest increase in incidents, rising 37% in the past year.

While teachers have told us loud and clear what they're most worried about when it comes to technology in schools, it's equally clear that they want help dealing with these issues. They simply can't do it alone.

62%
of teachers don't feel
fully supported to teach children about online safety

More than three-fifths (62%) of teachers say they don't feel fully supported to teach children about online safety, with 14% saying they have no support at all.

When asked specifically what that support might look like, teachers said:

Regular training sessions delivered by online safety experts (55%); Clearer guidelines from the school (52%); A dedicated helpline for teachers (40%); Government-led courses (28%)

A separate member of staff whose sole job it is to monitor pupils' online activity (27%)

Respondents also strongly expressed the need for an online safety officer to be present during school hours, with 81% saying this would help.

We also asked teachers to pick things that concern them most out of a list of potential issues.

Again, online bullying came out top, with 66% of respondents calling it a concern.

In fact, online bullying dwarfed all other worries in terms of how frequently it was picked: 39% of teachers say online grooming is a concern; 31% say radicalisation; 31% say the watching and sharing of pornographic material; 20% say self-harm; 19% say identity theft or privacy.

Only 4% of teachers surveyed said they have no safety concerns at all. But given some of the other findings in this report, this figure hardly comes as a shock.

37%

increase in instances of
online bullying in the past year

Now the question remains: do the concerns expressed by teachers align with the reality they're seeing in the classroom?

When asked what they've had to deal with in the classroom, 43% of teachers said online bullying.

Clearly, then, the concerns around tech being a catalyst for increased harassment between pupils are not unfounded nor overblown by the media. This is really happening. And it's getting worse.

Incidents of online bullying almost double the 24% of teachers who have had to deal with radicalisation in the classroom, for example. And similarly a comparatively low 22% have witnessed incidents involving pornographic material.

While it's shocking to see any instances involving these issues, it is at least somewhat promising to know that more than three-quarters of teachers haven't had to deal with them in school.

Even more positive is the fact that only 11% of teachers have experienced incidents of homophobic or racist content in the classroom.

The above findings are largely proportionate to what teachers cited as their biggest fears and concerns throughout our survey. It's therefore fair to assume their worries are based mostly on experience rather than any

outside influences. Although as highlighted above, fears of radicalisation do seem to be the anomaly here – prompting a disproportionate level of concern in relation to how much instances have increased.

34%

of teachers **aren't confident** they'd **know what to do** if a pupil was being **cyberbullied**

But how equipped do teachers feel when it comes to dealing with these issues?

More than a third (34%) say they are not confident they would know what to do if one of their pupils was being cyber-bullied.

A third again say they don't feel sure they would be able to tell if a child was being radicalised online.

Our report has shown that teachers are aware of the problems that stem from technology in schools, but clearly there are some significant skills and knowledge gaps when it comes to actually dealing with them once discovered.

The good news, however, is that the vast majority (86%) say their school has a clear process in place for escalating issues to do with online safety.

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This, at least, is a positive start.
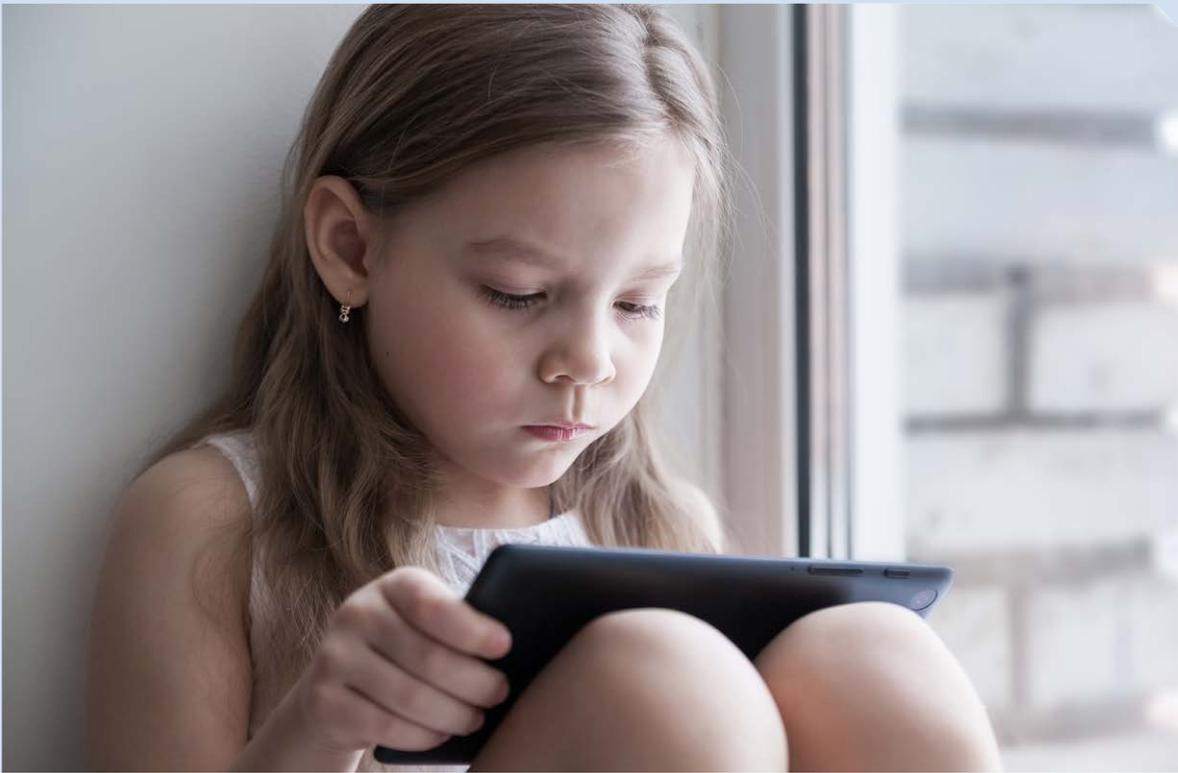
SMOOTHWALL SAYS
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"Sadly, cyberbullying is the biggest concern for teachers. What is most surprising, and worrying, is that despite the widespread media coverage of the bullying problem, incidents grew by 37% year-on-year. While equally concerning problems such as radicalisation are on the minds of teachers, cyberbullying remains both their biggest concern and most common problem. This is completely unacceptable.

This is not purely a technological problem, it's also social. In the digital age, new ways of communicating are commonplace which means we need to teach young people the dos and don'ts within that. It needs to be made clear that a verbal punch online is no different to a physical punch in the playground. They can have equally devastating impacts. It is the responsibility of every single stakeholder in education – from social media and technology companies like ourselves, to schools and the government – to truly stamp out cyberbullying by using technology to monitor for it and using communication to educate about it."

Closing comments

Some of the findings in this report confirm what we already suspected. Others, however, are shocking. Clear evidence that technology poses an increasing risk to children in schools.

But that's not to say technology is in itself a bad thing. Or that it should simply be curbed.

The benefits of technology in the classroom are clear: teachers are able to perform better than they otherwise could, and kids are more engaged than they were before.

One thing is equally clear, however: if schools are going to continue to benefit from technology in the ways outlined above, more needs to be done to control the risks.

We propose the following:
1. Increased government intervention
2. More training for teachers, parents and pupils
3. Better investment in smart web filtering tools

Let's go into each of those in more detail.

Increased government intervention
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With 84% of our survey respondents saying the government should be doing more to prepare teachers for keeping kids safe in class, this is clearly an area where there is plenty of work to be done.

The government has already taken some steps to tackle some issues. The Prevent duty, for example, has proved effective. And the government has also cracked down on certain social media sites in a bid to force them to prevent online bullying.

But are these steps enough? Clearly the problems aren't going away. If anything, they're becoming more prevalent.

So what more could be done?

Based on the findings in our report, we suggest the government should start by issuing much clearer guidelines for schools in terms of how to deal with online dangers.

They should also create a dedicated helpline for teachers who are concerned or confused about something happening in the classroom.

More training for teachers, parents and pupils
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But while these measures can help, ultimately the teachers on the front line are responsible for keeping pupils safe. And they can only do that if they're equipped with the right skills and knowledge.

Those teachers need more robust training around online dangers – how to spot the dangers but also how to prevent incidents from happening and deal with them when they do. And they need training on the latest digital tools that can make the task easier for them.

Parents, too, should be offered similar training so they can better protect children outside of school hours, while the pupils themselves need to be clued up on the dangers, how to spot them, and the potential harm they could cause.

Better investment in smart web filtering tools
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The above suggestions do require a certain degree of investment – not just financial but also in terms of time.

A more efficient and relatively low-cost way to keep track of online safety is through intelligent web filtering – using automated digital tools to alert teachers to dangerous activity without the need to manually sift through content.

By doing this, schools will be able to keep on top of the risks outlined in this report, without stifling the benefits that come from the use of technology in the classroom.

METHODOLOGY
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Research for this report was conducted by an independent research consultancy, Censuswide throughout June 2017.

504 UK primary and secondary school teachers with at least three years' experience were interviewed online. The teachers came from across the entirety of the UK.

ABOUT SMOOTHWALL

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Smoothwall are specialists in creating solutions that protect children online.

Developers of intelligent content-aware web filtering, cyber security solutions and on device monitoring, Smoothwall provides a safe online experience to users across the world.

Smoothwall have been working in education for over 15 years and currently protect more than 7,000 UK schools and one million students every day from accessing harmful content on the internet.

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